

## CLAIMS

1. A polynucleotide according to any one of the following (a) to (d):
  - (a) a polynucleotide comprising the protein coding region of the nucleotide sequence of SEQ ID NO: 1,
  - (b) a polynucleotide encoding a protein comprising the amino acid sequence of SEQ ID NO: 2,
  - (c) a polynucleotide encoding a protein that comprises the amino acid sequence of SEQ ID NO: 2 in which one or more amino acids have been substituted, deleted, inserted, and/or added, and is functionally equivalent to the protein comprising the amino acid sequence of SEQ ID NO: 2, and,
  - (d) a polynucleotide that (a) hybridizes to a polynucleotide comprising the nucleotide sequence of SEQ ID NO: 1 under stringent conditions, and (b) encodes a protein functionally equivalent to the protein comprising the amino acid sequence of SEQ ID NO: 2.
2. A polynucleotide encoding a partial peptide of a protein encoded by a polynucleotide according to claim 1.
3. A protein encoded by a polynucleotide according to claim 1 or 2.
- 20 4. A vector into which a polynucleotide according to claim 1 or 2 has been inserted.
5. A transformant harboring a polynucleotide according to claim 1 or 2, or the vector according to claim 4.
- 25 6. A method for producing the protein according to claim 3, wherein said method comprises the steps of culturing the transformant according to claim 5 and recovering the expression product.
7. An antibody against the protein according to claim 3.
- 30 8. An immunological method for assaying the protein according to claim 3, wherein said method comprises the step of detecting an immunological reaction between the antibody according to claim 7 and the protein according to claim 3.
9. A polynucleotide comprising at least 15 nucleotides, wherein said polynucleotide comprises a nucleotide sequence complementary to a polynucleotide according to claim 1, or to a complementary strand 35 thereof.

10. A primer for synthesizing a polynucleotide according to claim 1, which comprises the polynucleotide according to claim 9.
11. A probe for detecting a polynucleotide according to claim 1, which comprises the polynucleotide according to claim 9.
- 5 12. An antisense DNA against a polynucleotide according to claim 1, or a portion thereof.
13. A method of screening for a compound binding to the protein according to claim 3, wherein said method comprises the steps of:
  - (a) contacting the protein according to claim 3 with a test sample, 10 and,
  - (b) selecting a compound binding to the protein.
14. A compound binding to the protein according to claim 3, which is isolated by a method as set forth in claim 13.
15. A method of screening for a compound regulating the incorporation 15 of a long chain fatty acid to a cell expressing the protein according to claim 3, wherein said method comprises the steps of:
  - (a) contacting the cell expressing the protein according to claim 3 with the labeled long chain fatty acid and a test sample, and incubating the mixture,
  - (b) measuring the activity of incorporating the long chain fatty acid 20 into the cell, and,
  - (c) selecting a compound regulating the incorporation activity based on a comparison with the activity measured in the absence of the test sample.
- 25 16. A compound for regulating the incorporation of a long chain fatty acid to a cell expressing the protein according to claim 3, wherein the compound is isolated by a method as set forth in claim 15.